1942 ✓ (8)

Reprinted from THE ANATOMICAL RECORD
Vol. 84, page 483. 1942

R. W. SPERRY. Harvard Biological Laboratories. Fixed persistence in the rat of spinal reflex patterns rendered extremely maladaptive by cross union of sensory nerves.

After crossing nerves from the left hind foot to the right hind foot in 16 rats, the right foot became reinnervated only by nerves that originally supplied the left foot. This resulted in all cases in a false localization of sensation and a reversal of hind limb reflexes mediated by the crossed nerves. Although extremely maladaptive, the reversed spinal reflexes persisted through prolonged training over a period of ten months without correction or inhibition by central nervous adjustment.